

Forbes's Plover *Charadrius forbesi* breeding in Central Africa

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On 7 October 1990 we found a nest of Forbes's Plover *Charadrius forbesi* with 3 eggs at the Zambezi rapids, Mwinilunga, North Western Province, Zambia, 11°08'S, 24°10'E. This very local species has been reported from scattered localities in Zambia, the Lukanga Swamp, Central Province, being the limit of its southerly range (Benson *et al.* 1971). There were no previous breeding records, but Tree (1969) reviewing the status of waders in Zambia suggested that this species might breed at Mpulila Pan, Ndola, where collected specimens showed slight gonad activity in August 1963.

The nest was discovered in mid-morning. We had been walking in line over an expanse of exposed, whale-backed, black rock, at no great height above, and 300 m from, the Zambezi River. We saw a Forbes's Plover fly low towards and then between us, and settle on a somewhat higher level rock slab. We hid ourselves as best we could in the sparse and scattered cover of short, wispy dry grass, after which the plover ran down the rocky slope and settled on its eggs. The nest site was situated on a 30° angle of sloping rock of a cul-de-sac, i.e. it was not on the main, rather uniform expanse of rock, but at one side of this feature. The nest consisted of a shallow cup of dark grey, very small, coarse and angular stones (grit), varying in size from 10 × 8 down to 3.5 × 3 mm, the structure measuring 70 mm in diameter and 20 mm in depth. The 3 eggs measured and weighed 29.2 × 23.4 (8.6 g), 28.8 × 23.4 (8.3 g) and 28.7 × 23.8 (8.9 g) mm. The eggs are beautiful and distinctive. Their shape is short blunt oval, texture matt, the ground creamy-pink which is handsomely blotched warm brownish-wine over shell smears of lilac-grey. Incubation had only recently begun. Once the nest had been found the incubating bird showed little fear and readily returned to the eggs despite our close proximity.

Discussion

This is the first breeding record for Central Africa, 18 nests with eggs having been found in Nigeria, West Africa. Brown (1947, and in Bannerman 1951) was the first to discover the nest of *C. forbesi*, on the top of a granite inselberg, 500 ft above the canopy of surrounding woodland, in the Ilorin district. Later, in 1954, Serle (1956) collected C/3 of this species at Enugu, a distance of approximately 2500 (±100) km from the present record. The less than adequate description of 3 eggs in Urban *et al.* (1986) was taken from Serle (1956) who, however, fully described his eggs together with their precise measurements and illustrated his paper with a photographic plate.

Authors have emphasised the similar appearance between Forbes's Plover and Three-banded Plover *C. tricollaris*. Bock (1958) downgraded *forbesi* to a subspecies of the latter, this decision being followed

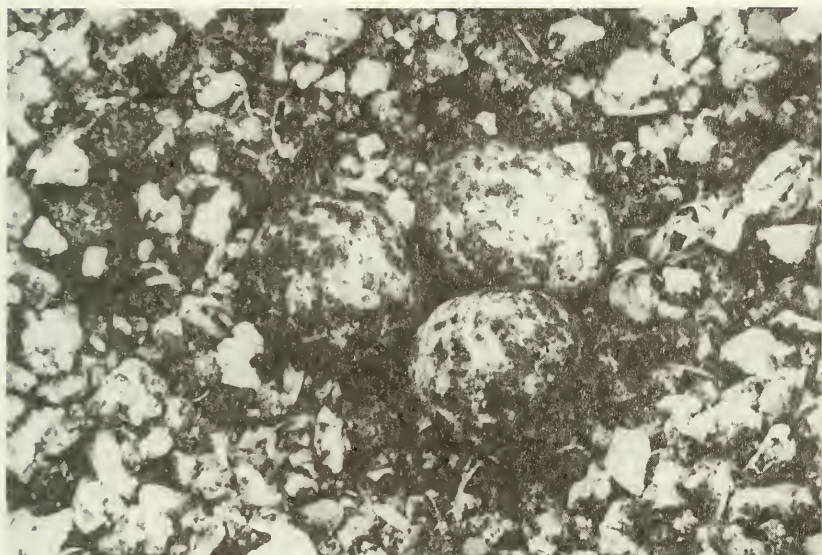


Figure 1. Eggs of Forbes's Plover. Zambezi Rapids, Zambia, 7 October 1990.

by Johnsgard (1981), and Jehl (1968) does not mention or list *forbesi* in his study of the downy young of shorebirds. Snow (1978) places *C. tricollaris* and *forbesi* in a species-group, commenting on "the evolution of the two species from a single widespread common ancestor" (p. 183). Urban *et al.* (1986) go further and consider them to be members of a superspecies and Marchant *et al.* (1986) also consider them to be close relatives. We do not agree with any of the foregoing, rather we concur with Sibley & Monroe (1990) that these two species are "different morphologically" (p. 217). We are especially impressed by the differences in the eggs, as previously pointed out by Serle (1956). However, in our opinion, the choice of the egg specimen of *C. tricollaris* photographed alongside the egg of *forbesi* in Serle's paper is unrepresentative. This egg is clearly depicted as subelliptical in shape and densely and evenly covered in scrawls, which makes it appear more like *Cursorius africanus* than a typical egg of *C. tricollaris*. One of us (J.C.R.) has examined 64 eggs of *C. tricollaris* in Zambia and none have been subelliptical, but all were pyriform or pointed oval. The eggs of *tricollaris* are indeed well marked with fine scrawls or hair lines of black or dark brown, but seldom evenly spread over the surface and most often concentrated in one, two or three heavy bands around the egg. The ground varies from cream to pale ivory-yellow. The egg specimen of *forbesi* in Serle's plate is a good example and is much like our own from Zambia, though ours are shorter and more rounded. The best and fullest description of the eggs of *tricollaris* is by James (1922), based on the study of 200 nests which he had found in South Africa. By

comparison the average size of 60 eggs of *C. tricoloris* from Zambia is 29.1×22.1 mm and the average weight of 14 freshly laid eggs was 7.69 g (6.9–8.8). All clutches were invariably of two eggs, as were the many more found by James. In contrast, Brown (1948) found clutches of *C. forbesi* to be either of two or three eggs, ours and Serle's being of the latter size.

Egg characteristics are similar in some undoubtedly closely related species of *Charadrius*. An obvious example of similar, but not identical, eggs, are those laid by Kittlitz's Plover *C. pecuarius* and its Atlantic island relative *C. sanctaehelenae*. More significant, perhaps, is another example shown by the huge geographical range of the Kentish Plover *C. alexandrinus* combined with its relatives *marginatus*, *pallidus* and *ruficapillus*, the eggs of which all show much the same characteristics. Though we make no claim that eggs are always an infallible guide to relationships, we emphasise that the eggs of *C. forbesi* show no similarities to those of *C. tricoloris* and do not support a close relationship between these two species.

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